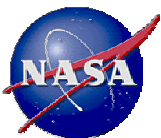# POC Lidar Software

Michael Matthews/589   Lead
Dr. Mike Behrenfeld/972   Observational Sciences Branch
Jim Yungel/EG&G   Observational Sciences Branch
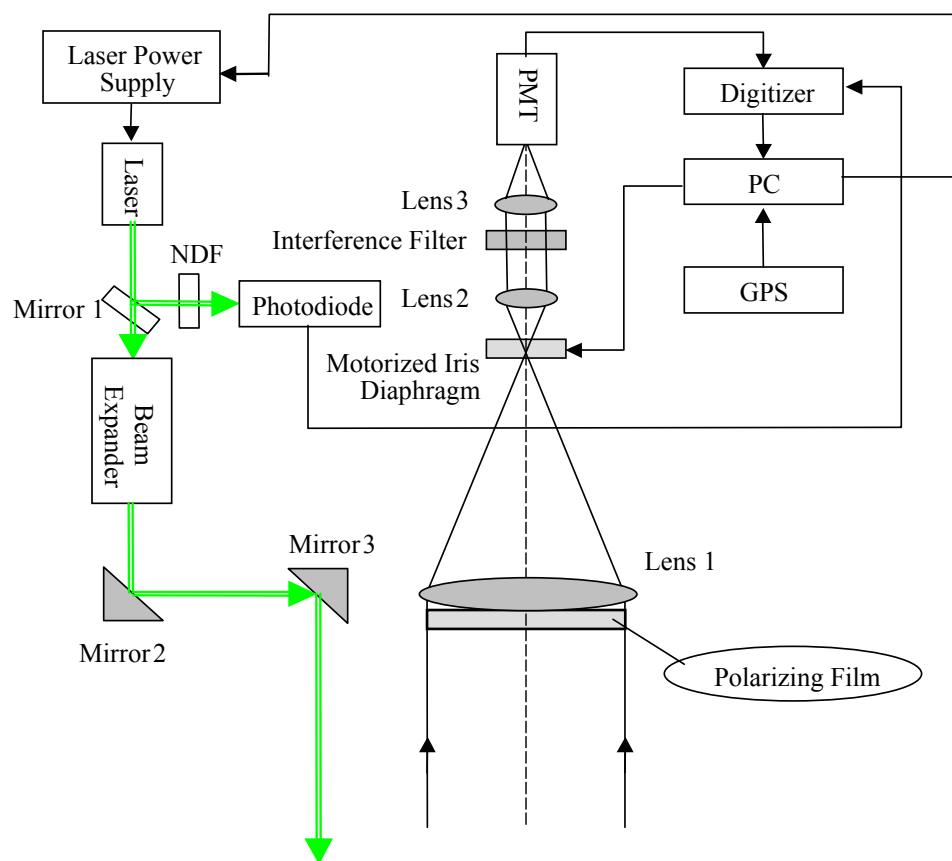
Objective/Scope

POC Lidar is a project in the Observational Sciences Branch to measure Particulate Organic Carbon in the ocean using a lidar instrument.   Initially to be demonstrated as a ship borne application, the goal is to migrate this to an aircraft-based application


Our objective is to develop the PC software which will acquire the digitized waveform from the PMT and perform requested calculations and visualizations to assist the scientists in evaluating the data. It will also control the iris and laser power supply.
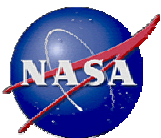
Status/Next Steps

- ✓ Laser construction complete
- ✓ Data acquisition functions coded
- ✓ First Iteration of visual interface completed
- ✓ First Iteration of iris control software complete
- ✓ Submitted to 972 for testing, made changes and additions in response to feedback
- ✓ Added capability to process simulated data
- ✓ Developed binary archiving format and coded as class

- ❑ Implement binary archiving format into software, making changes in acquisition and display functions.
- ❑ Develop functions to perform requested calculations
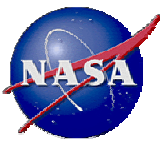
Resources

Budget

- All products purchased by Code 972
- Project Purchases
  - Lunchbox computer - $3100
  - Information supplied to Code 972 for purchasing
- Any contractor help provided through 972

Manpower

- Civil Servant – 0.6 FTE through September

Schedule

	Projected	Actual
Lunchbox Delivery -	6/25/03	9/14/03
First iteration of software (data acq, GUI, archiving)	9/03	11/03
Product Testing	9/1-9/14/03	12/1-1/15/04
Implement changes as result of testing	2/31/04	3/15/04
Second iteration (iris control, advanced archiving, data processing)	9/04	
Testing	9/15-9/30/04	
Product Delivery	10/1/04	

Risk Matrix

LIKELIHOOD

5
4
3
2
1

1 (cell at consequence 3, likelihood 4)

CONSEQUENCES
1 2 3 4 5
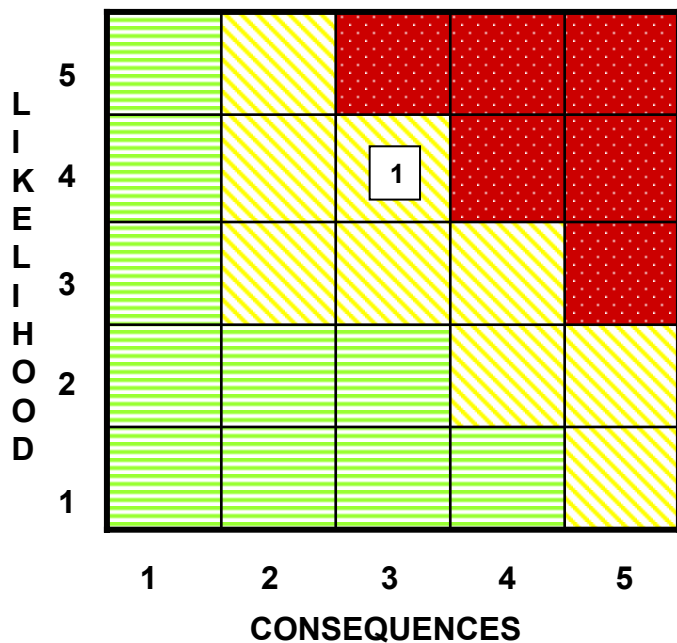
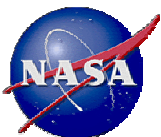| Rank & Trend	Risk ID	Approach	Risk Title
1 ⇩	PL-01	M	Laser hardware

Legend

Criticality
high
med
low

L X C Trend
⇩ Decreasing (improving)
⇧ Increasing (worsening)
⇨ Unchanged
NEW (since last period)
DROP (after this report)

Approach
M - Mitigate
W - Watch
A - Accept
R - Research

Risk ID	Rank	Risk Statement	Approach & Plan	Status
med PL-01	1	Laser failed and underwent repair from 03/04 – 5/04 . No access to functioning hardware setup, nor able to capture data for testing during development.	Mitigate: Code software to provide simulated data similar to that provided by laser.	Simulating code completed, allowed continuation of development during laser repair.